

Figure 1. Real-time in situ ellipsometry recorded close-up view of the ALD cycles averaged over 10 cycle data showing film growth behavior for pre-annealed GaN deposition at 200 °C substrate temperature, $N_2/H_2/Ar=50/100/0$ plasma chemistry and 150W plasma power.



Figure 2. GIXRD spectra of 600-cycle grown pre-annealed GaN films on Si(100) substrate at 150 & 200W, plasma power, $N_2/H_2/Ar=50/100/0$ plasma chemistry and 200°C substrate temperature showing (002) dominant crystalline orientation.